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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,627

08/06/2003

Wen-Yueh Jang

11112-US-PA

1626

31561

7590

03/29/2004

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

SOWARD, IDA M

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,627

Applicant(s)

JANG, WEN-YUEH

Examiner

Ida M Soward

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the election filed March 9, 2004.

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-9 in Paper No. 03-09-04 is acknowledged.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "**304**" and "**340**" have both been used to designate **reset line** in paragraph [0037]. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because the "}" symbol is faded in Figure 3A. A proposed drawing correction or corrected drawings are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: **120** in Figure 1 and **420** in Figures 7-7A and 9. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because “**comprising**” should have been **including** in line 2. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: “**lin e304**” should have been **line 304** in paragraph [0038].

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5 and 7-9 are rejected under 35 U.S.C. 102(a, b) as being anticipated by Admitted Prior Art Figure 1.

In regard to claim 1, Admitted Prior Art Figure 1 teaches a resistance random access memory structure, comprising: a plurality (inherent, one cell shown) of word lines 102 in a substrate 100; a plurality of reset lines 104 coupled to the word lines; a dielectric layer 114 on the substrate 100; a plurality of memory units 107 in the dielectric layer, each the memory including a bottom electrode 108, a top electrode 110, and a resistive thin film 112 between the top electrode and the bottom electrode, the bottom electrodes of the memory units in a same column being coupled to one of the reset lines 104; and a plurality of the bit lines 118 on the memory units, the top electrodes of the memory units in a same row being coupled to one of the bit lines (paragraph [0007]).

In regard to claim 2, Admitted Prior Art Figure 1 teaches the ion type (P) of the reset lines being opposite to the ion type (N) of the word lines (paragraph [0007]).

In regard to claim 4, Admitted Prior Art Figure 1 teaches a word line contact window 116 in the dielectric layer 114, wherein the word line contact window is coupled to the word line 102 (paragraph [0007]).

In regard to claim 5, Admitted Prior Art Figure 1-2 teaches a plurality of doped regions 104 & 106 in the word line 102, wherein the doped region 106 is coupled to the word line contact window 116, and wherein an ion types (N) of the doped region 106 and the word line 102 is same (paragraph [0007]).

In regard to claim 7, Admitted Prior Art Figure 1 teaches the memory unit 107 in a same column set on a surface of the reset lines 104 (paragraph [0007]).

In regard to claim 8, Admitted Prior Art Figures 1 teaches a resistive thin film material being resistance-reversible (paragraph [0005]).

In regard to claim 9, Admitted Prior Art Figure 1 teaches a resistive thin film material selected from colossal magneto resistive thin films and oxidation thin films having Perovskite structure (paragraphs [0005]-[0006]).

Allowable Subject Matter

Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to random access memory structures having reset lines:

Chi (6,087,690)

Kudo et al. (5,861,645)

Lee et al. (US 6,433,373 B1)

McGrath (US 6,169,318 B1)

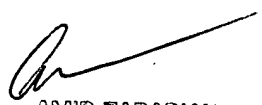
Son (5,578,511).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday, 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMS
March 18, 2004


AMIR ZABADON
SENIOR PATENT EXAMINER
TECHNOLOGY CENTER 2822